

CLAIMS

What is claimed is:

- 1 1. A method comprising:
2 capturing an image;
3 determining if the image has changed, and if the image has changed,
4 sending the image to a server; and
5 if the image has not changed with a period, sending a heartbeat to indicate
6 continued functionality.
- 1 2. The method of claim 1, wherein determining if the image has
2 changed comprises detecting motion in the image.
- 1 3. The method of claim 1, wherein sending a heartbeat is smaller, and
2 thus uses less bandwidth than sending an image.
- 1 4. The method of claim 3, wherein the heartbeat comprises a
2 compressed version of the unchanged image, including a time stamp.
- 1 5. The method of claim 3, wherein the heartbeat comprises a time
2 stamp.
- 1 6. The method of claim 3, wherein the heartbeat is a single bit.
- 1 7. An apparatus comprising:
2 a camera for obtaining images;
3 an interface to send a new image if the new image is different from the old
4 image; and
5 a heartbeat logic to send a heartbeat signal, if the new image has not been
6 different from the old image in a period of time.

1 8. The apparatus of claim 7, further comprising:
2 a motion detector to compare the new image with the old image, and
3 determine if the new image is different from the old image.

1 9. The apparatus of claim 7, wherein the camera periodically obtains a
2 new image.

1 10. The apparatus of claim 7, further comprising a timer, the timer
2 reset every time the interface send a new image, and the timer indicating to the
3 heartbeat logic to send the heartbeat signal, if the timer reaches a value.

1 11. The apparatus of claim 1, wherein sending a heartbeat is smaller,
2 and thus uses less bandwidth than sending an image.

1 12. The apparatus of claim 11, wherein the heartbeat comprises a
2 compressed version of the unchanged image, including a time stamp.

1 13. The apparatus of claim 11, wherein the heartbeat comprises a time
2 stamp.

1 ~~14. A method of obtaining images and a status of a camera, the method~~
2 comprising:

3 ~~sending a new image, if the new image is different from an old image; and~~
4 ~~sending a heartbeat, if the new image is not different from the old image.~~

1 15. The method of claim 14, wherein the new image is send
2 periodically at a first rate, and the heartbeat is sent periodically at a second rate.

1 16. The method of claim 15, wherein the heartbeat is sent only if a

2 ~~series of new images were the same as the old images.~~

1 17. The method of claim 14, further comprising:
2 using a first timer to periodically send the new images; and
3 using a second timer, to send the heartbeat, if no new images were sent
4 within a period.

1 ~~18. The method of claim 17, further comprising resetting the second~~
2 ~~timer when the new image is sent.~~

1 19. A system of providing images to a user, the system comprising:
2 a plurality of cameras for periodically obtaining images;
3 a camera control system to collect images from the plurality of cameras,
4 the camera control system including:
5 a comparison logic to determine whether a new image
6 obtained by a camera is different from an old image obtained by
7 the camera;
8 a heartbeat logic to generate a heartbeat signal, if the new
9 image has not been different from the old image in a period of time;
10 and
11 an interface to send the new images that are different from
12 old images through a network;
13 a server to receive the images from the camera control system and server
14 them to the user.

1 20. The system of claim 19, wherein the interface further sends a
2 heartbeat for those cameras that have not had an image sent in a previous set of
3 cycles.